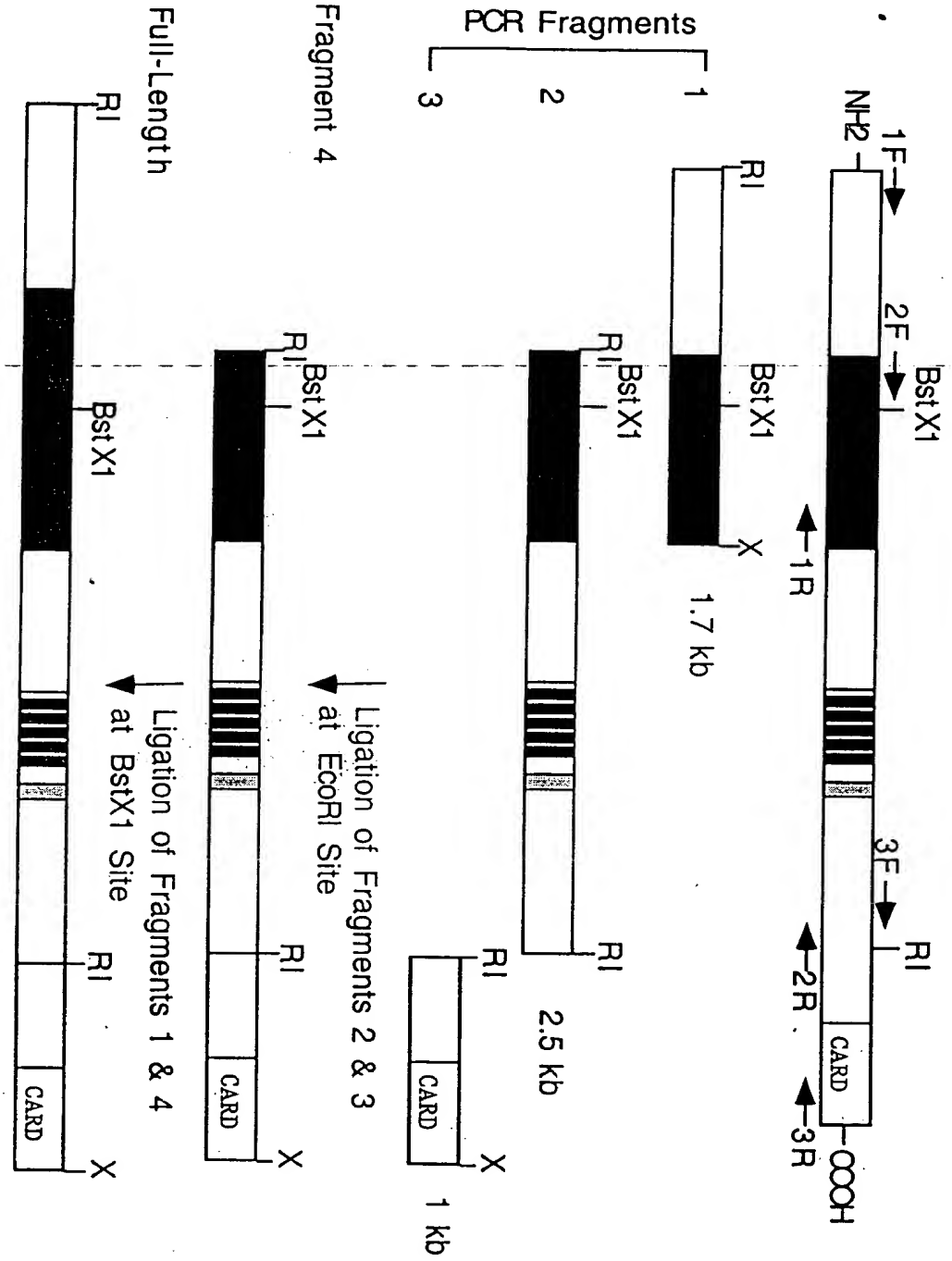

PCR Fragments
1
2
3
NH2
1F
2F
3F
1R
2R
3R
RI
Bst X1
X
CARD
COOH
1.7 kb
2.5 kb
1 kb
Fragment 4
Ligation of Fragments 2 & 3
at EcoRI Site
Full-Length
Ligation of Fragments 1 & 4
at BstX1 Site

FIGURE 1A

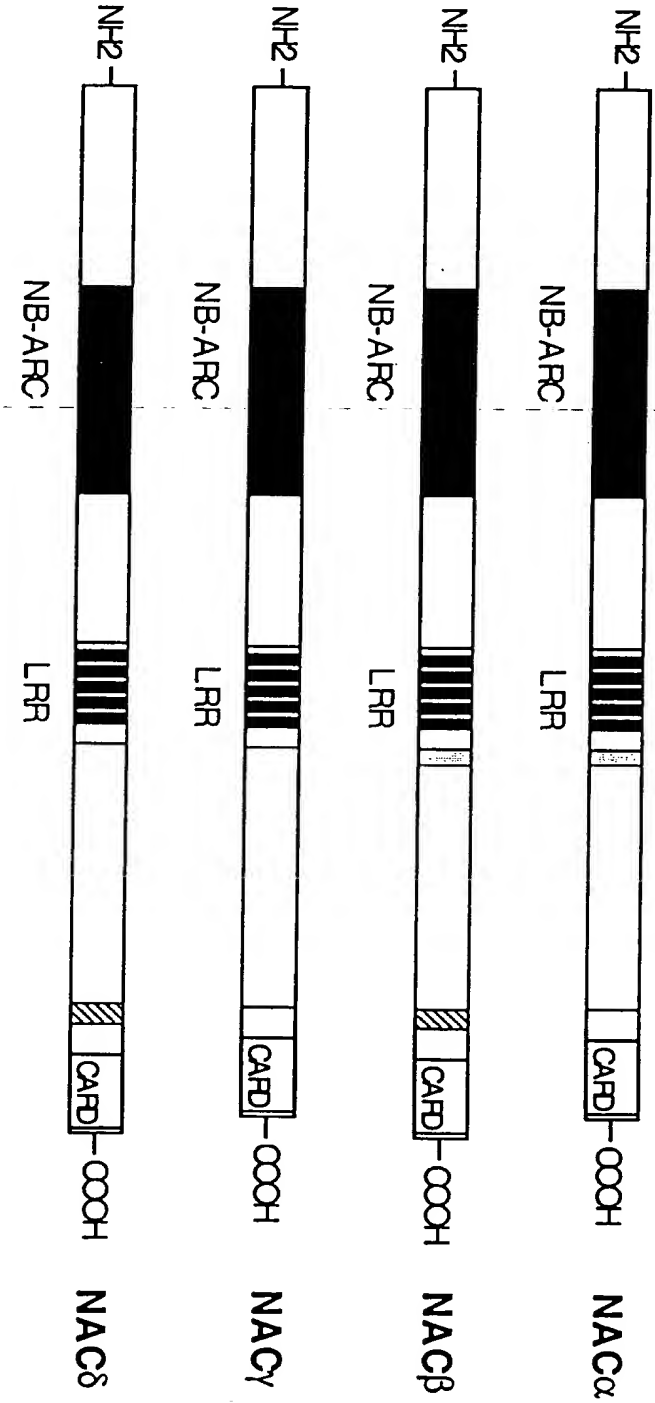


FIGURE 1B

```
ATG GCT GCC GGA CCC TGG CGC CCC CTG CCC TGT TAC TTG GAG TTC CTG AAG AAG GAG GAG  CTG AAG GAG TTC CAG CTT CTG CTC GCC AAT AAA GCG CAC TCC AGG AGC TCT TCG GGT GAG  120
M  A  G  G  A  W  G  R  L  A  C  Y  L  E  F  L  K  K  E  E    L  K  E  F  Q  L  L  L  A  N  K  A  H  S  R  S  S  S  G  E   40
ACA CCC CCT CAG CCA GAG AAG ACG AGT GCC ATG GAG GTG CCC TCG TAC CTG GTG CCT CAG  TAT GCG GAG CAG CGG CCC TGG GAC CTA GCC CTC CAT ACC TGG GAG CAG ATG CGG CTG AGG  240
T  P  A  Q  P  E  K  T  S  G  M  E  V  A  S  Y  L  V  A  Q    Y  G  E  Q  R  A  W  D  L  A  L  H  T  W  E  Q  M  G  L  R   80
TCA CTG TCC CCC CAA GCC CAG GAA GCG GCA GCC CAC TCT CCC TCA TTC CCC TAC ACC CCA  AGT GAA CCC CAC CTG GGG TCT CCC AGC CAA CCC ACC TCC ACC GCA GTG CTA ATG CCC TGG  360
S  L  C  A  Q  A  Q  E  G  A  G  H  S  P  S  F  P  Y  S  P    S  E  P  H  L  G  S  P  S  Q  P  T  S  T  A  V  L  M  P  W  120
ATC CAT GAA TTG CGG GCG GGG TCC ACC CAG CCC TCA GAG AGA AGG GTT TTG ACA CAG CTG  CCT GAC ACA TCT CCA CCC CCC TGG AGA GAA ATC TCT CCC TCA CTC CTC TAC CAA CCT CTT  480
I  H  E  L  P  A  G  C  T  Q  G  S  E  R  R  V  L  R  Q  L    P  D  T  S  G  R  R  W  R  E  I  S  A  S  L  L  Y  Q  A  L  160
CCA ACC TCC CCA GAC CAT GAG TCT CCA ACC CAG GAG TCA CCC AAC CCC CCC ACA TCC ACA  GCA GTG CTG GGG ACC TGG GGA TCC CCA CCT CAG CCC ACC CTA GCA CCC AGA GAG CAG GAG  600
P  S  S  P  D  H  E  S  P  S  Q  E  S  P  N  A  P  T  S  T    A  V  L  G  S  W  G  S  P  P  Q  P  S  L  A  P  R  E  Q  E  200
GCT CCT GGG ACC CAA TGG CCT CTG GAT GAA ACG TCA GGA ATT TAC TAC ACA GAA ATC AGA  CAA AGA GAG AGA GAG AAA TCA GAG AAA GCC AGG CCC CCA TGG CCA GGG GTG GTA GGA ACG  720
A  P  G  T  Q  W  P  L  D  E  T  S  G  I  Y  Y  T  E  I  R    E  R  E  R  E  K  S  E  K  G  R  P  P  W  A  A  V  V  G  T  240
CCC CCA CAG GGG CAC ACC ACC CTA CAG CCC CAC CAC CAC CCA TGG GAG CCT TCT GTG AGA  GAG ACC CTC TGT TCC ACA TGG CCC TGG AAA AAT GAG GAT TTT AAC CAA AAA TTC ACA CAG  840
P  P  Q  A  H  T  S  L  Q  P  H  H  H  P  W  E  P  S  V  R    E  S  L  C  S  T  W  P  W  K  N  E  D  F  N  Q  K  F  T  Q  280
CTG CTA CTT CTA CAA AGA CCT CAC CCC AGA ACC CAA GAT CCC CTG GTC AAG AGA ACC TGG  CCT GAT TAT GTG GAG GAG AAT CGA GCA CAT TTA ATT GAG ATC AGA GAC TTA TTT GCC CCA  960
L  L  L  L  Q  R  P  H  P  R  S  Q  D  P  L  V  K  R  S  W    P  D  Y  V  E  E  N  R  G  H  L  I  E  I  R  D  L  F  G  P  320
GCC CTG GAT ACC CAA GAA CCT CGC ATA GTC ATA CTG CAG CGG CCT CCT CGA ATT GGG AAG  TCA ACA CTG GCC AGG CAG GTG AAG GAA GCC TGG CGG AGA CCC CAG CTG TAT CGG GAC CCC  1080
G  L  D  T  Q  E  P  R  I  V  I  L  Q  G  A  A  G  I  G  K    S  T  L  A  R  Q  V  K  E  A  W  G  R  G  Q  L  Y  G  D  R  360
                          P-loop (Walker A)
TTC CAG CAT GTC TTC TAC TTC AGC TCC AGA GAG CTG GCC CAG TCC AAG GTG GTG AGT CTC  GCT GAG CTC ATC GGA AAA GAT GGG ACA GCC ACT CGG GCT CCC ATT AGA CAG ATC CTG TCT  1200
F  Q  H  V  F  Y  F  S  C  R  E  L  A  Q  S  K  V  V  S  L    A  E  L  I  G  K  D  G  T  A  T  P  A  P  I  R  Q  I  L  S  400
AGG CCA GAG CGG CTG CTC TTC ATC CTC GAT GGT GTA GAT GAG CCA GGA TGG GTC TTG CAG  GAG CGG AGT TCT GAG CTC TGT CTG CAC TGG AGC CAG CCA CAG CGG GGG GAT GCA CTG CTG  1320
R  P  E  R  L  L  F  I  L  D  G  V  D  E  P  G  W  V  L  Q    E  P  S  S  E  L  C  L  H  W  S  Q  P  Q  P  A  D  A  L  L  440
                          Walker B
GCC AGT TTG CTG GGG AAA ACT ATA CTT CCC GAG GCA TCC TTC CTG ATC ACG GCT CGG ACC  ACA GCT CTG CAG AAC CTC ATT GCT TCT TTG GAG CAG GCA CGT TGG GTA GAG GTC CTG GGG  1440
G  S  L  L  G  K  T  I  L  P  E  A  S  F  L  I  T  A  R  T    T  A  L  Q  N  L  I  P  S  L  E  Q  A  R  W  V  E  V  L  G  480
TTC TCT GAG TCC ACC AGG AAG GAA TAT TTC TAC AGA TAT TTC ACA GAT GAA AGG CAA GCA  ATT AGA GCC TTT AGG TTG GTC AAA TCA AAC AAA GAG CTC TGG CCC CTG TGT CTT GTG CCC  1560
F  S  E  S  S  R  K  E  Y  F  Y  R  Y  F  T  D  E  R  Q  A    I  R  A  F  R  L  V  K  S  N  K  E  L  W  A  L  C  L  V  P  520
TGG GTG TCC TGG CTG GCC TGC ACT TCC CTG ATG CAG CAG ATG AAG CGG AAG GAA AAA CTC  ACA CTG ACT TCC AAG ACC ACC ACA ACC CTC TGT CTA CAT TAC CTT GCC CAG GCT CTC CAA  1680
W  V  S  W  L  A  C  T  C  L  M  Q  Q  M  K  R  K  E  K  L    T  L  T  S  K  T  T  T  T  L  C  L  H  Y  L  A  Q  A  L  Q  560
GCT CAG CCA TTG GGA CCC CAG CTC AGA GAC CTC TCC TCT CTG GCT GCT GAG GCC ATC TGG  CAA AAA AAG ACC CTT TTC AGT CCA GAT GAC CTC AGG AAG CAT GGG TTA GAT GGG GCC ATC  1800
A  Q  P  L  G  P  Q  L  R  D  L  C  S  L  A  A  E  G  I  W    Q  K  K  T  L  F  S  P  D  D  L  R  K  H  G  L  D  G  A  I  600
ATC TCC ACC TTC TTG AAG ATG GGT ATT CTT CAA GAG CAC CCC ATC CCT CTG ACC TAC ACC  TTC ATT CAC CTC TGT TTC CAA GAG TTC TTT GCA GCA ATG TCC TAT GTC TTG GAG GAT GAG  1920
I  S  T  F  L  K  M  G  I  L  Q  E  H  P  I  P  L  S  Y  S    F  I  H  L  C  F  Q  E  F  F  A  A  M  S  Y  V  L  E  D  E  640
AAG GGG AGA GGT AAA CAT TCT AAT TCC ATC ATA GAT TTG GAA AAG ACG CTA GAA GCA TAT  GGA ATA CAT GCC CTG TTT GGG GCA TCA ACC ACA CGT TTC CTA TTG GCC CTG TTA AGT GAT  2040
K  G  R  G  K  H  S  N  C  I  I  D  L  E  K  T  L  E  A  Y    G  I  H  G  L  F  G  A  S  T  T  R  F  L  L  G  L  L  S  D  680
GAG GGG GAG AGA GAG ATG GAG AAC ATC TTT CAC TCC CGG CTG TCT CAG GGG AGG AAC CTG  ATG CAG TGG GTC CGG TCC CTG CAG CTG CTG CTG CAG GCA CAC TCT CTG GAG TCC CTC CAC  2160
E  G  E  R  E  M  E  N  I  F  H  C  R  L  S  Q  G  R  N  L    M  Q  W  V  P  S  L  Q  L  L  L  Q  P  H  S  L  E  S  L  H  720
TGC TTG TAC GAG ACT CGG AAC AAA ACG TTC CTG ACA CAA GTG ATG GCC CAT TTC GAA GAA  ATG GCC ATG TGT GTA GAA ACA GAC ATG GAG CTC TTA GTG TGC ACT TTC TGC ATT AAA TTC  2280
C  L  Y  E  T  R  N  K  T  F  L  T  Q  V  M  A  H  F  E  E    M  G  M  C  V  E  T  D  M  E  L  L  V  C  T  F  C  I  K  F  760
ACC GCC CAC GTG AAG AAG CTT CAG CTG ATT GAG GCC AGG CAG CAC AGA TCA ACA TGG ACC  CCC ACC ATG GTA GTC CTG TTC AGG TGG GTC CCA GTC ACA GAT GCC TAT TGG CAG ATT CTC  2400
S  R  H  V  K  K  L  Q  L  I  E  G  R  Q  H  R  S  T  W  S    P  T  M  V  V  L  F  R  W  V  P  V  T  D  A  Y  W  Q  I  L  800
TTC TCC GTC CTC AAG GTC ACC AGA AAC CTG AAG GAG CTG GAC CTA AGT GGA AAC TGG CTG  ACC CAC TCT GCA GTG AAG AGT CTT TGT AAG ACC CTG AGA CCC CCT CGC TGC CTC CTG GAG  2520
F  S  V  L  K  V  T  R  N  L  K  E  L  D  L  S  G  N  S  L    S  H  S  A  V  K  S  L  C  K  T  L  R  R  P  R  C  L  L  E  840
ACC CTG CGG TTG GCT GGC TGT GCC CTC ACA GCT GAG GAC TGC AAG GAC CTT CCC TTT CGG  CTG AGA GCC AAC CAG ACC CTG ACC GAG CTG GAC CTG AGC TTC AAT GTG CTC ACG GAT GCT  2640
T  L  R  L  A  G  C  G  L  T  A  E  D  C  K  D  L  A  F  G    L  R  A  N  Q  T  L  T  E  L  D  L  S  F  N  V  L  T  D  A  880
GGA GCC AAA CAC CTT TGC CAG AGA CTG AGA CAG CGG AGC TGC AAG CTA CAG GGA CTG CAG  CTG GTC AGC TGT GCC CTC AGG TCT GAC TGC TGC CAG GAC CTG GCC TCT GTG CTT AGT GCC  2760
G  A  K  H  L  C  Q  R  L  R  Q  P  S  C  K  L  Q  R  L  Q    L  V  S  C  G  L  T  S  D  C  C  Q  D  L  A  S  V  L  S  A  920
AGC CCC ACC CTG AAG GAG CTA GAC CTG CAG CAG AAC AAC CTG GAT GAC GTT GGC GTG GGA  CTG CTC TGT GAG GGG CTC AGG CAT GCT GCC TGC AAA CTC ATA GCC CTG CGG CTG GAC CAG  2880
S  P  S  L  K  E  L  D  L  Q  Q  N  N  L  D  D  V  G  V  R    L  L  C  E  G  L  R  H  P  A  C  K  L  I  R  L  G  L  D  Q  960
ACA ACT CTG AGT GAT GAG ATG AGG CAG GAA CTG AGG GCC CTG GAG CAG GAG AAA CCT CAG  CTG CTC ATC TTC AGC AGA CGG AAA CCA AGT GTG ATG ACC CCT ACT GAG GCC CTG GAT AGG  3000
T  T  L  S  D  E  M  R  Q  E  L  R  A  L  E  Q  E  K  P  Q    L  L  I  F  S  R  R  K  P  S  V  M  T  P  T  E  G  L  D  T  1000
GGA GAG ATG AGT AAT AGC ACA TCC TCA CTC AAG CGG CAG AGA CTC GGA TCA CAG AGG CGG  GCT TCC CAT GTT GCT CAG GCT AAT CTC AAA CTC CTG GAC GTG AGC AAG ATC TTC CCA ATT  3120
G  E  M  S  N  S  T  S  S  L  K  R  Q  R  L  G  S  E  R  A    S  H  V  A  Q  A  N  L  K  L  L  D  V  S  K  I  F  P  I  1040
GCT GAG ATT GCA GAG GAA AGC TCC CCA GAG GTA GTA CGG GTG GAA CTC TTG TCC GTG CCT  TCT CCT GCC TCT CAA GGG GAC CTG CAT AGG AAG CCT TTG GGG ACT GAC GAT GAC TTC TGG  3240
A  E  I  A  E  E  S  S  P  E  V  V  P  V  E  L  L  C  V  P    S  P  A  S  Q  G  D  L  H  T  K  P  L  G  T  D  D  D  F  W  1080
GGC CCC AGG GGG CCT GTG GCT ACT GAG GTA GTT GAC AAA GAA AAG AAC TTG TAC CGA GTT  CAC TTC CCT GTA GCT GGC TCC TAC CCC TGG CCC AAC AGG GGT CTC TGC TTT GTG ATG AGA  3360
G  P  T  G  P  V  A  T  E  V  V  D  K  E  K  N  L  Y  R  V    H  F  P  V  A  G  S  Y  R  W  P  N  T  G  L  C  F  V  M  R  1120
GAA GGG GTG ACC GTT GAG ATT GAA TTC TGT GTG TGG GAC CAG TTC CTG GGT GAG ATC AAC  CCA CAG CAC ACC TGG ATG GTG CCA GGG CCT CTG CTG GAC ATC AAG GCT GAG CCT GGA GCT  3480
E  A  V  T  V  E  I  E  F  C  V  W  D  Q  F  L  G  E  I  N    P  Q  H  S  W  M  V  A  G  P  L  L  D  I  K  A  E  P  G  A  1160
GTG GAA GCT GTG CAC CTC CCT CAC TTT GTG GCT CTC CAA GGG GCC CAT GTG GAC ACA TCC  CTG TTC CAA ATG GCC CAC TTT AAA GAG GAG GGG ATG CTC CTG GAG AAG CCA GCC ACG GTG  3600
V  E  A  V  H  L  P  H  F  V  A  L  Q  G  G  H  V  D  T  S    L  F  Q  M  A  H  F  K  E  E  G  M  L  L  E  K  P  A  R  V  1200
GAG CTG CAT CAC ATA GTT CTG GAA AAC CCC AGC TTC TCC CCC TTG GGA GTC CTC CTG AAA  ATG ATC CAT AAT GCC CTG CGC TTC ATT CCC GTC ACC TCT GTG GTG TTG CTT TAC CAC CGC  3720
E  L  H  H  I  V  L  E  N  P  S  F  S  P  L  G  V  L  L  K    M  I  H  N  A  L  R  F  I  P  V  T  S  V  V  L  L  Y  H  R  1240
GTC CAT CCT GAG GAA GTC ACC TTC CAC CTC TAC CTG ATC CCA AGT GAC TGC TCC ATT CGG  AAG CGC ATA GAT GAT CTA GAA ATG AAA TTC CAG TTT GTG GCA ATC CAC AAG CCA CCC CGG  3840
V  H  P  E  E  V  T  F  H  L  Y  L  I  P  S  D  C  S  I  R    K  A  I  D  D  L  E  M  K  F  Q  F  V  R  I  H  K  P  P  P  1280
CTG ACC CCA CTT TAT ATG CCC TGT CGT TAC ACT GTG TCT CGG TCT GGT TCA CGG ATG CTG  GAA ATA CTC CGC AAG GAA CTG GAG CTC TGC TAT GCA ACC CCT GGA GAA GAC CAG CTG TTC  3960
L  T  P  L  Y  M  G  C  R  Y  T  V  S  G  S  G  S  G  M  L    E  I  L  P  K  E  L  E  L  C  Y  R  S  P  G  E  D  Q  L  F  1320
TGG GAG TTC TAC GTT GCC CAC TTG GGA TCA GGG ATC AGG CTG CAA GTG AAA GAC AAG AAA  GAT GAG ACT CTG GTG TGG GAG GCC TTG GTG AAA CCA GGA GAT CTC ATG CCT GCA ACT ACT  4080
S  E  F  Y  V  G  H  L  G  S  G  I  R  L  Q  V  K  D  K  K    D  E  T  L  V  W  E  A  L  V  K  P  G  D  L  M  P  A  T  T  1360
CTG ATC CCT CCA GCC CCC ATA GCC GTA CCT TCA CCT CTG GAT GCC CGG CAG TTG CTG CAC  TTT GTG GAC CAG TAT GGA GAG CAG CTG ATA GCC GCA GTG ACA TCG GTG GAG GAT GTC TTG  4200
L  I  P  P  A  R  I  A  V  P  S  P  L  D  A  P  Q  L  L  H    F  V  D  Q  Y  G  E  Q  L  I  A  R  V  T  S  V  E  V  V  L  1400
GAC AAA CTG CAT GGA CAG GTG CTG ACC CAG GAG CAG TAC GAG AGG GTG CTG GCT GAG AAC  ACG ACG CCC AGC CAG ATG CGG AAG CTG TTC AGC TTG AGC CAG TCC TGG GAC CGG AAG TCC  4320
D  K  L  H  G  Q  V  L  S  Q  E  Q  Y  E  R  V  L  A  E  N    T  R  P  S  Q  M  R  K  L  F  S  L  S  Q  S  W  D  R  K  C  1440
AAA GAT GGA CTC TAC CAA GCC CTG AAG GAG ACC CAT GCT CAC CTC ATT ATG GAA CTC TGG  GAG AAG CCC AGC AAA AAG GGA CTC CTG CCA CTC ACC AGC TGA                          4422
K  D  G  L  Y  Q  A  L  K  E  T  H  P  H  L  I  M  E  L  W    E  K  G  S  K  K  G  L  L  P  L  S  S  *                    1473
```

FIGURE 1C

FIGURE 1D

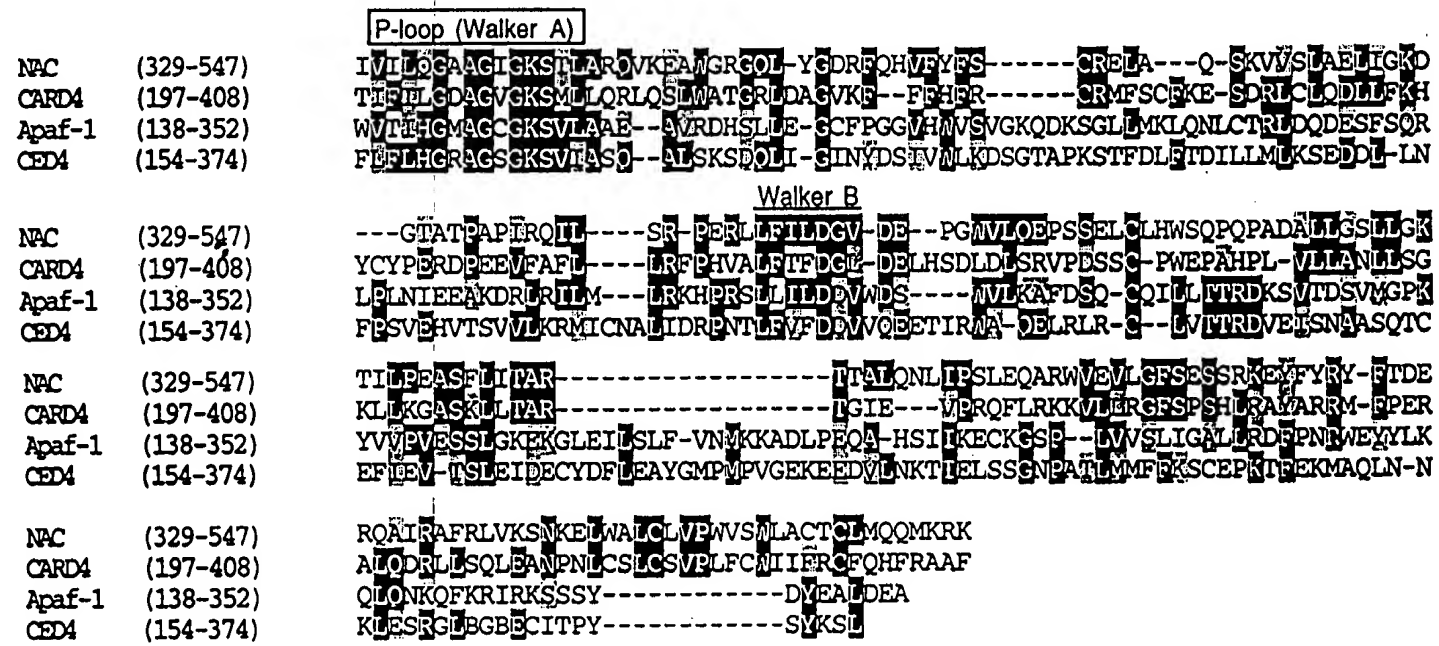


FIGURE 1E

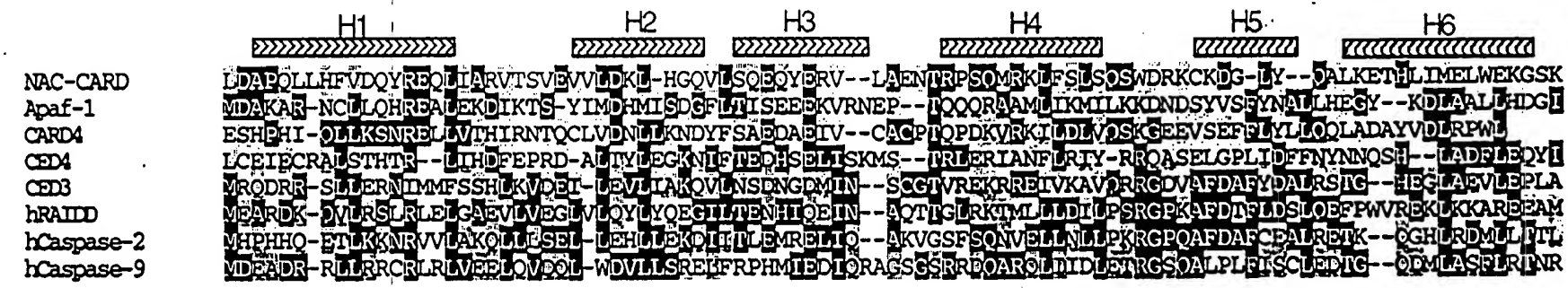


FIGURE 2A

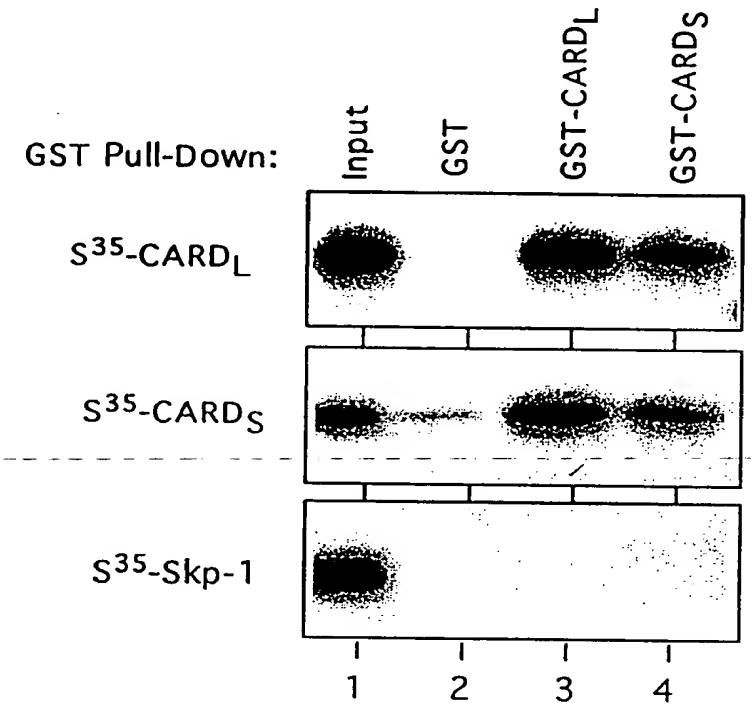
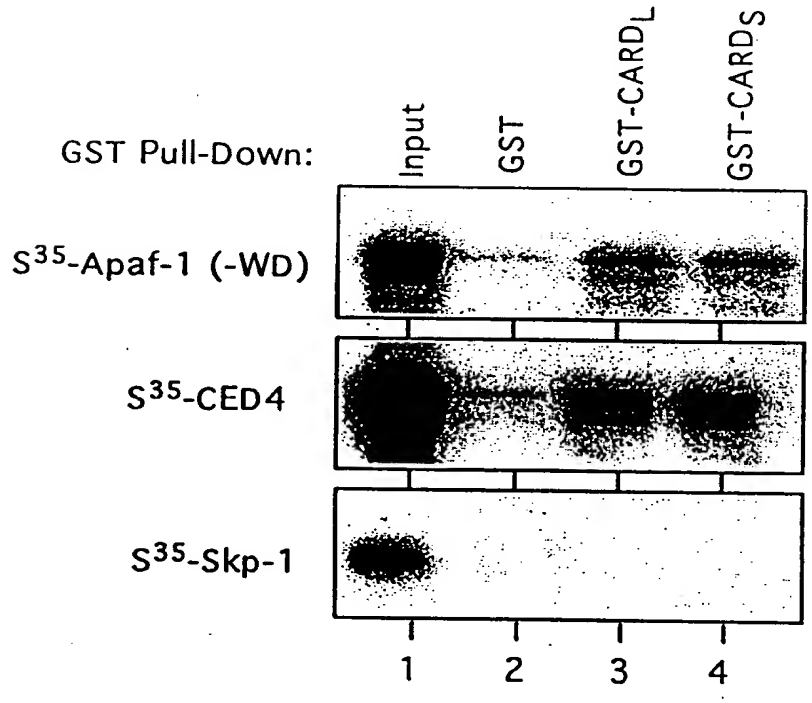


FIGURE 2B



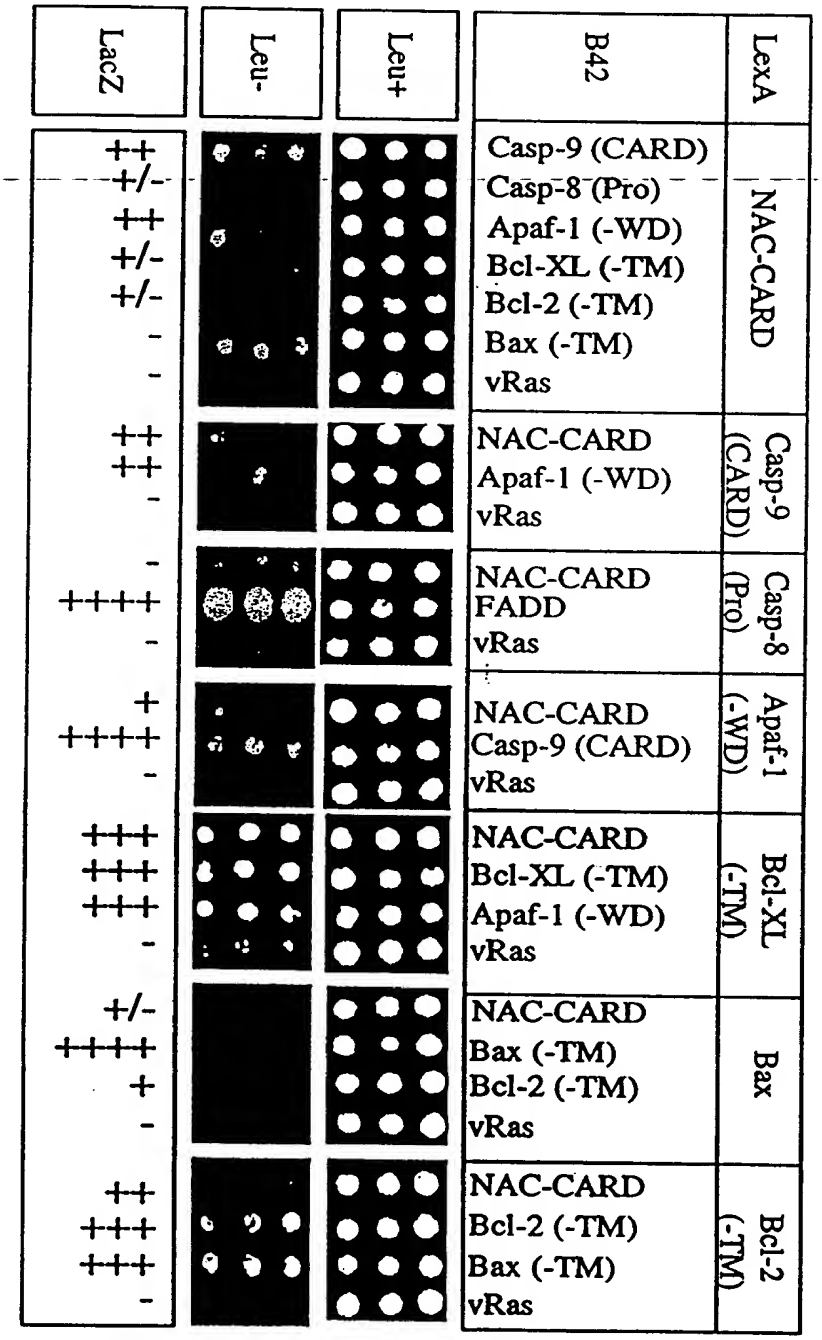

LacZ
Leu-
Leu+
B42
LexA
++
+/-
++
+/-
+/-
-
-
Casp-9 (CARD)
Casp-8 (Pro)
Apaf-1 (-WD)
Bcl-XL (-TM)
Bcl-2 (-TM)
Bax (-TM)
vRas
NAC-CARD
++
++
-
NAC-CARD
Apaf-1 (-WD)
vRas
Casp-9 (CARD)
-
++++
-
NAC-CARD
FADD
vRas
Casp-8 (Pro)
+
++++
-
NAC-CARD
Casp-9 (CARD)
vRas
Apaf-1 (-WD)
+++
+++
+++
-
NAC-CARD
Bcl-XL (-TM)
Apaf-1 (-WD)
vRas
Bcl-XL (-TM)
+/-
++++
+
-
NAC-CARD
Bax (-TM)
Bcl-2 (-TM)
vRas
Bax
++
+++
+++
-
NAC-CARD
Bcl-2 (-TM)
Bax (-TM)
vRas
Bcl-2 (-TM)

FIGURE 3

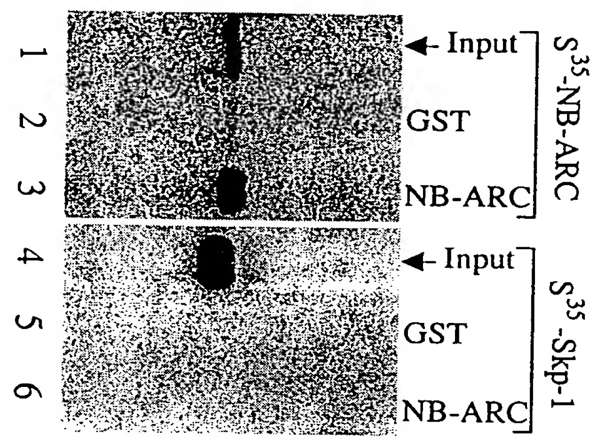


FIGURE 4

FIGURE 5A

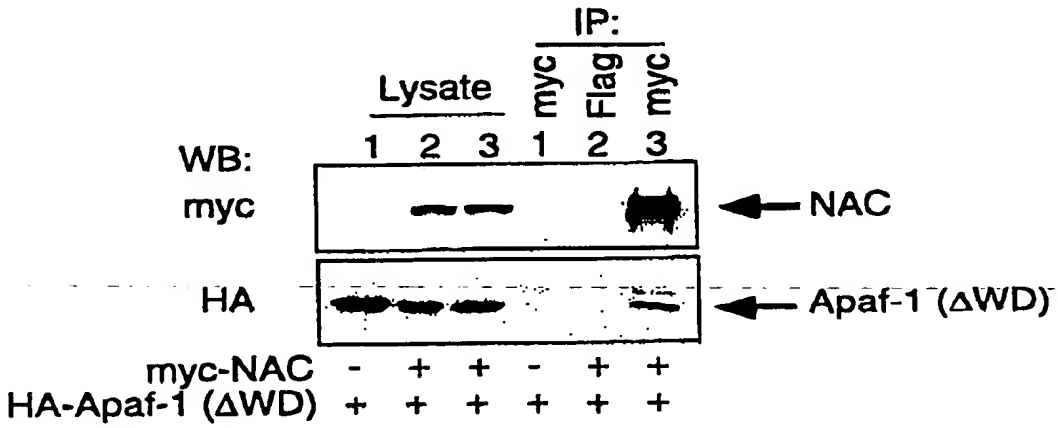


FIGURE 5B

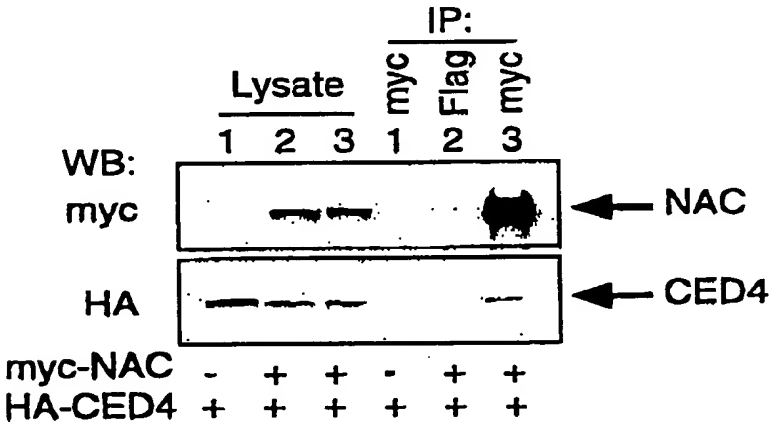


FIGURE 6A

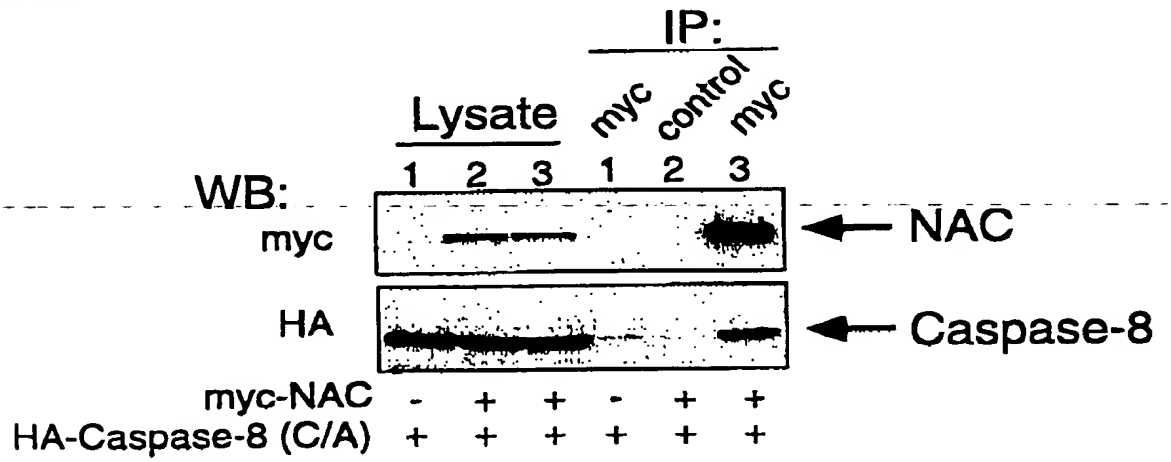


FIGURE 6B